

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Central Montana Resources, LLC  
**Well Name/Number:** Joe C. King and Sons, Inc.- Yellow Water No. 1  
**Location:** NE SW Section 6 T13N R26E  
**County:** Petroleum, MT; Field (or Wildcat) W/C

**Air Quality**

(possible concerns)

Long drilling time: No, 6 to 10 days drilling time.

Unusually deep drilling (high horsepower rig): No, a double drilling rig to drill a vertical hole to 2450' Heath Formation test.

Possible H2S gas production: Slight chance of H2S.

In/near Class I air quality area: No class I air quality area.

Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: No special concerns – using triple derrick rig to drill to a vertical hole to 2450' Heath Formation test.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, surface hole and main hole will be drilled with freshwater based drilling fluid.

High water table: No high water table in the area of review.

Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral drainage to Yellow Water Reservoir, about 1/8 of a mile to the east from this location.

Yellowtail Reservoir is about 1/4 of a mile to the south from this location.

Water well contamination: No, nearest water wells are about 1 mile and further in any direction from this well location. Depth of this water well is 1175'. This well will set 8 5/8" surface casing to 600' and cement to surface. Surface hole will be drilled with freshwater and freshwater drilling mud. If productive 5 1/2" production casing will be run and cemented to surface.

Porous/permeable soils: No, silty sandy bentonitic soils.

Class I stream drainage: Yes, Yellow Water Creek is a Class I stream drainage.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 600' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used on surface hole and mainhole. If productive 5 ½" production casing will be run and cemented to surface. Completion fluids will be recycled out of the lined pit. Will utilize a closed loop drilling fluid system, freshwater drilled cuttings/mud solids will be land farmed on location. Lined pit will backfilled when dry. No concerns.

### **Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No stream crossings require.

High erosion potential: No, small cut, up to 4.9' and small fill, up to 5.7', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, approximate location size is 250'X300', required.

Damage to improvements: Slight, surface use appears to be private grazing land.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be from existing county road, Yellow Water Road and ranch trail. Short road to be built from trail access into location, about 475'. Freshwater drilled cuttings and mud solids will land farmed on the well location. Lined pit will backfilled when dry. No concerns.

### **Health Hazards/Noise**

(possible concerns)

Proximity to public facilities/residences: Residence, none within 1 mile in any direction from this location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Small drilling rig/short 6 to 10 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Operational BOP and adequate surface casing should mitigate any problems. No concerns.

### **Wildlife/recreation**

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): Warhorse National Wildlife Refuge boundary, about ½ of a mile to the north and east.

Proximity to recreation sites: Yellow Water Reservoir.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered species identified are the Pallid Sturgeon and the Black Footed Ferret. Species of concern, Greater Sage Grouse and Sprague's Pipit. NH tracker site lists the following: Black tailed Prairie Dog, Grasshopper Sparrow, Hoary Bat, Golden Eagle, Burrowing Owl, Chestnut-collared Longspur, Greater Sage Grouse, Clarks Nutcracker, Loggerhead Shrike, Long-billed Curlew, Sage Thrasher, McCown's Longspur and Brewer's Sparrow.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: \_\_\_\_\_

Comments: Private surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: \_\_\_\_\_

Comments: Private surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Social/Economic**

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: Well is a wildcat, until production is established no social or economic impact can be assessed.

### **Remarks or Special Concerns for this site**

Well is a wildcat vertical hole to 2450'Heath Formation test.

### **Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected. Some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki  
(title:) Chief Field Inspector  
Date: September 16, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology GWIC website

(Name and Agency)  
Petroleum County water wells

(subject discussed)  
August 27, 2011  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES  
MONTANA COUNTIES, Petroleum County  
(subject discussed)

August 27, 2011  
(date)

Montana Natural Heritage Program Website (FWP)  
(Name and Agency)  
Heritage State Rank= S1, S2, S3, T13N R26E  
(subject discussed)

August 27, 2011  
(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_